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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/901,378	07/09/2001	Johannes-Jorg Rueger	10191/1888	6581

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EXAMINER

BUDD, MARK OSBORNE

ART UNIT	PAPER NUMBER
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2834

DATE MAILED: 09/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

901378

Applicant(s)

Rueger et al

Examiner

M. Budd

Group Art Unit

2834

---The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address---

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1-11 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-11 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

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Claim 11 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim is vague and indefinite in that "during an injection" has no antecedent basis. There is no indication of where any "two detected voltage values" are obtained or what they represent. There is also a lack of structural co-operation between parts, e.g. how is "a switch connected in series with a voltage source and in a piezo-electric actuator ? That is to say what is meant by connected "in" a piezo-electric resonator? The computer is not related to the circuit in any meaningful way, it merely compares two undefined voltages in one operation and in a separate, unrelated event, responds to some threshold being exceeded. It is also not clear how "a supply lead" relates to the rest of the circuit. Is it a supply lead to the voltage source, the piezo-electric resonator, the computer, the measurement unit or what? Due to the above problems one cannot determine the metes and bounds of this claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4 and 9-11 rejected under 35 U.S.C. 102(a) as being anticipated by Divljaklovic (765) and (947) and Reuger.

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Each reference teaches detecting voltage in an injector to determine if it is operating properly. This is done by comparing measured values with pre-determined values via a computer program.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:


(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-8 rejected under 35 U.S.C. 103(a) as being unpatentable over Divljakovic (765), Rueger or Divljakovic (947).

As noted above, the references teach the basic fault detecting method but are not explicit as to shut-down of an individual injector, all injectors or the entire system. Note the piezo-elements are routinely discharged as part of the normal operating cycle. The concept of shutting down a malfunctioning device (e.g. before more damage occurs) is so well known that to apply it to any specific machine would be within the skill expected of the routineer, - and would therefore have been an obvious conclusion to one of ordinary skill in the art as regards the operation of the Rueger or Divljakovic devices.

M BUDD/pj

09/20/02

  
MARK U. BUDD  
PRIMARY EXAMINER  
ART UNIT 212